

A VIRGINIAN PELTANDRA

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In RHODORA, xlii. 360 and 430-432, plate 627 (1940), I pointed out the many striking characters which distinguish a species of *Peltandra* of bottomlands and wooded swamps of southeastern Virginia, thence locally southward (characteristic material before me from upland Georgia and from Florida). Whereas the common and wideranging *P. virginica* (L.) Schott & Endl. has the green or barely pale-bordered undulate-margined spathe tightly inrolled around the white or whitish spadix with staminate flowers usually extending to the tip, the plant of Prince George and Sussex Counties (presumably in adjacent counties) of southeastern Virginia has the limb of the spathe green only near the middle of the back, the open to spreading white border 1-1.7 cm. wide each side of the middle band, the orange-yellow spadix exposed and with the terminal 1-3 centimeters naked. The spathe of *P. virginica* at anthesis is (1.1-)1.3-2.5 dm. long, in the plant of southeastern Virginia 0.9-2 dm. long. In *P. virginica* the lower fourth of the flowering spathe is continuous with the limb, the latter in fruit rotting away and persisting as a beak-like remnant at the summit of the fruiting spathe which is 3-6 cm. long¹. In the problematic plant of southeastern Virginia there is a strong constriction or stoutish neck at the base of the flaring limb, this constricted portion soon deliquescing and by circumscission leaving a truncated fruiting spathe 5.5-8 cm. long. In *P. virginica* the thoroughly dried green to amber berries are 6-12 mm. long; in the southeastern Virginian plant 1-1.5 cm. long. In short, the two species are in almost every character distinct but, whereas the leaf-blade of *P. virginica* is excessively variable, that of the new species is relatively constant in outline. At one station of the latter, along a woodland creek, where Long and I were collecting the plant, a game-warden stopped his car to investigate

¹ *Peltandra Tharpia* Barkley in Madroño, vii. 131, t. 21 (fig. at left) (1944) was separated as a new Texan species because of its "scapes . . . recurving; spathe green, 3.5-4 cm. long, 1.5-2.5 cm. broad, completely enveloping the spadix". As shown by his illustration, the description was based on a fruiting plant with the regularly recurving scape, and the lower fourth of the original spathe, the small insert showing the characteristic short beak of the fruiting spathe of *P. virginica*. The leaves, as shown in the plate and in an isotype before me, are those of *P. virginica*, forma *hastifolia* Blake in RHODORA, xiv. 105, v. 94, fig. 3 (1912).

the obvious poaching going on within sight of the road. When we showed him the collection of white spathes with the orange-yellow spadices, suggesting miniature calla-lilies, his prompt and rather contemptuous reply was simply: "Oh! gathering water-lilies!" Nobody would think of so denominating the tight green and far from ornamental spathes of *P. virginica*.

When I described and illustrated this novel plant of southeastern Virginia, being then completely overwhelmed by the mass of detailed study in all directions before I could satisfactorily answer the thousands of insistent queries, "How soon will the Manual be done?" (each accompanied by some such note as "I am inclosing a stamped envelope; please send me a list of all the changes you are making. I need them by the end of next week"), I tried to pass this problem over to others, writing: "If someone will volunteer to collate the material and reach a decision I shall be greatly relieved". But the boomerang returns. After eight years, having had no relief, not even a post-card on the subject, it is necessary to spend four days clearing the problem myself. Fortunately, Rafinesque's nine reputed species seem to contain nothing which can definitely be associated with the plant with white limb and golden spadix. The only one of them which might have to be considered is *P. Walteri* (Ell.) Raf. New Fl. N. Am. i. 88 (1836):

7. PELTANDRA WALTERI Raf. Arum sagittifolium Walter, Arum Walteri Elliot. Leaves triangular sagittate, angles divaricate acute. In Carolina, not well described, but very near *P. latifolia*, said to be larger than *P. hastata* with similar flowers.

Rafinesque's diagnosis was surely copied directly from Elliott's ("not well described") very brief one of his *Arum* "WALTERI?", based on *A. sagittifolium* sensu Walt., not L. Furthermore, Elliott was separating it from *A. virginicum*, which had "*Spathe* . . . slightly repand or undulate along the margin, closely embracing the spadix", only by the shape of the leaf, for "In the spathe and spadix I have noticed no difference". In other words, *Peltandra Walteri* was nothing but one of the many leaf-forms of *P. virginica*.

As to the identity of the basic *Arum virginicum* L. Sp. Pl. 966 (1753), the diagnosis was the briefest and most inconclusive possible:

virginicum. 13. ARUM acaule, foliis hastato-cordatis acutis:
angulis obtusis. *Hort. cliff.* 434 [*i.e.* 435].

**Gron. virg.* 112.

Habitat in Virginia. 2

Hortus Cliffortianus gives nothing more clarifying. The leaf of the *Clayton* plant, no. 228, described by Gronovius and preserved at the British Museum of Natural History, is of the typical form of *Peltandra virginica* as interpreted by Blake in *RHODORA*, xiv. 104 (1912), but the "pene viridi" of Clayton's account, following the Gronovian diagnosis, can have been based only on the green spathe tightly rolled around the spadix. The identity of *P. virginica* seems to be clear. I do not now hesitate to describe

PELTANDRA luteospadix, sp. nov., *P. virginicae* similis; spathae margine lacteo expanso 1–1.7 cm. lato; spadice luteo apice sterili; limbo deinde circumscissile, spatho fructifero truncato 5.5–8 cm. longo; fructibus siccatis 1–1.5 cm. longis.—*P. virginica*, southern representative, Fernald in *RHODORA*, xlii. 360, 430, tab. 627 (1940), where essential characters are noted. TYPE from bottom-land-swamp, Nottoway River, southwest of Homeville, Sussex County, VIRGINIA, June 18, 1939, *Fernald & Long*, no. 10,179 in Herb. Gray; ISOTYPE in Herb. Phil. Acad. Other numbers from Virginia, of which duplicates were sent to various herbaria, are: SUSSEX Co.: Three Creek, southwest of Grizzard, no. 10,176; Jones Hole Swamp, west of Coddysore, nos. 10,177 and 11,279; Assamoosick Swamp, northeast of Homeville, no. 10,178. PRINCE GEORGE Co.: Powell's Creek, Garysville, no. 8178. From farther south are the following: Booth's Bottoms, near Sandy Creek, near Athens, GEORGIA, *Perry, Strahan & Sublett*, no. 797. FLORIDA, without further data, *Chapman*.

Although more clearly related to *Peltandra virginica* in its large green leaves, large and somewhat coriaceous spathe, coarse and long spadix and large green or greenish berries, *P. luteospadix* shares some characters with the southern *P. sagittifolia* (Michx.) Morong.¹ The latter, however, is a relatively small plant, with

¹ Unfortunately, through the bibliographic method of the original *Index Kewensis* and those who have followed it, this little southern species appears in Small's and other works as *Peltandra glauca* (Ell.) Feay, with the synonyms "*P. alba* Raf. *P. sagittifolia* (Mich.) Morong not Raf." To be sure, *Index Kewensis* gives under *Peltandra* the entry: "*sagittaefolia* Rafin. in Journ. Phys. lxxxix. (1819) 102 = *Xanthosoma sagittaefolium*"; but, had Small taken the trouble to look up the reference to Rafinesque, he would have found no such combination there made. Michaux, *Fl. Bor.-Am.* ii. 187 (1803) clearly described the small southern species as *Calla sagittifolia*, with no reference whatever to the wholly different *Arum sagittifolium* Walt.

small glaucous leaves and much smaller spathe, spadix and red berries. The very thin white blade of the spathe is white throughout and not nearly as long as in *P. luteospadix*, but the base of the blade is constricted or forming a neck, and the small spadix is yellow. Although it is conceivable that *P. luteospadix* arose in the far-distant past through crossing of *P. virginica* and *P. sagittifolia*, the northern limit of the latter seems to be in Onslow County, North Carolina, fully 140 miles south of the concentrated area of the constant and freely fruiting *P. luteospadix* in southeastern Virginia. In the latter region the new species flowers later than does *P. virginica* in other parts of eastern Virginia and North Carolina. The freshly flowering material of *P. luteospadix* was collected after the middle of June. The freshly flowering material of *P. virginica* from Virginia and eastern North Carolina before me shows a flowering period there beginning in late April or early May.

(see above) nor to the tropical American *Arum sagittae-folium* L. Sp. Pl. 966 (1753) which is generally considered to belong to *Xanthosoma* (I decline to sidetrack myself into untangling the nomenclature there; *Index Kewensis* gives citations for three species called by the editors *X. sagittifolium*). Ventenat in Roemer, Arch. ii³: 347 (1801—the title-page date, although *I. K.* says 1800), took up the genus *Caladium*, which, shortly before, he had defined in his Descr. Pl. Jard. Cels. t. 30 (1801), and on p. 351 he had a species, *C. sagittae-folium*, based on Jacquin, Hort. Bot. Vindob. (73) t. 157 (1770), Jacquin correctly calling the plant, beautifully illustrated, *Arum sagittae-folium* L. and stating that it came from tropical America. It is a *Xanthosoma*. The first reference in *Index Kewensis* under this *Caladium sagittae-folium* is "Vent. Jard. Cels. sub t. 30", followed by the correct reference for the binomial, "et in Roem. Arch.", etc. The latter reference leads directly to a discussion by Ventenat of the genus and to the binomial; but the former reference leads to the mere citation of a list of 8 species of *Arum* which, in addition to the properly combined *C. bicolor* (Ait.) Vent., constitute the genus. The binomial was not there made. Now, returning to the reputed *Peltandra sagittae-folia* or *sagittifolia* "Rafin". of *Index Kewensis* and of Small, it is clear that Rafinesque made no such combination in the place cited; it was wrongly ascribed to him by the editors of *I. K.* Rafinesque, discussing his genus *Peltandra* in Journ. Phys. lxxxix. 103 (not 102 as given by *I. K.*), simply said: "Les *Calladium sagittae-folium* et *C. virginicum* se rapportent à ce genre; mais je le base sur une nouvelle espèce *P. undulata*", which was described in some detail from "État de New-York" and is inseparable from *P. virginica* (L.) Schott & Endl. *Caladium sagittae-folium*, cited by Rafinesque, was, of course, the tropical American *Xanthosoma* and had nothing to do with *Calla sagittifolia* Michx. As I understand the nomenclature of the latter it is as follows:

PELTANDRA SAGITTIFOLIA (Michx.) Morong in Mem. Torr. Bot. Cl. v. 102 (1894), as *sagittae-folia*. *Calla sagittifolia* Michx. Fl. Bor.-Am. ii. 187 (1803). *Arum sagittifolium* (Michx.) Pursh. Fl. Am. Sept. 299 (1814), not *A. sagittae-folium* L. *Caladium sagittifolium*? Nutt. Gen. ii. 222 (1818), not *C. sagittae-folium* (L.) Vent. *Caladium glaucum*? Ell. Sk. ii. 631 (1824). *P. alba* Raf. New Fl. N. Am. i. 88 (1836). *Xanthosoma sagittifolium* sensu Chapm. Fl. So. U. S. 441 (1860), not Schott. *P. glauca* (Ell.) Feay ex Wood, Class-bk. 669 (1861).